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(54) MUSIC/INFORMATION PROVIDING DEVICE USED ON CAR

(57)Abstract:

PROBLEM TO BE SOLVED: To solve the problems that safety of car operations may be adversely affected when obtaining information from the Internet during a driving even though the contents of the information are customized and reduced to their essence and the switching operations between a communication terminal used on the car and car audio equipment become cumbersome.

SOLUTION: Liking of a driver is beforehand registered to an information server and a program is constituted of by setting the order of information providing. An on-vehicle

equipment assembles the program from the data set by the driver and controls a radio, a CD player and the device which reads text information for the driver. Moreover, an operating switch is provided to control the progress of the program. Having completed the above constitution, information/music is prioritized in accordance with the liking of the driver and then provided to the driver. Thus, the information is efficiently provided to the driver, the number of operations of the on-vehicle equipment is reduced and safe information providing is realized. Moreover, integrated operations are realized regardless of the kind of on-vehicle equipment such as a receiver and adverse effect on driving is minimized.

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## CLAIMS

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[Claim(s)]

[Claim 1] An information offer station chooses and distributes music and information according to individual humanity news including the program information which the user set up. A current District Public Prosecutor's Office appearance means for music and information offer equipment to provide a user with the music and information received in in the car, and to detect the present location of a car, An input means to acquire the actuation which controls progress of a program, and the means of communications which communicates with an information offer station and receives program information, and music and information at least, The music and

information received by said means of communications while obtaining the present location detected with said current District Public Prosecutor's Office appearance means. The direct or data-processing means which is processed and is told to an output-control means, A storage means to memorize said program information at least, and the program control means which constitutes the program for which a user asks according to the actuation information and said program information from said input means, Music and information offer equipment characterized by having the output-control means which controls an audio output by said program control means at least, and an output means to output music and information by control of said output-control means.

[Claim 2] An input means is the music and information offer equipment according to claim 1 characterized by acquiring the actuation information which recognizes a user's voice and controls progress of a program.

[Claim 3] They are the music and the information offer equipment according to claim 1 or 2 characterized by to change the offer sequence of a program that the input means acquired the actuation information which interrupts the output of the present program at least and directs the output of degree program, a storage means memorized this actuation information, a data-processing means updated program information using the actuation information which memorized, and an output was interrupted.

[Claim 4] They are music and information offer equipment given in claims 1-3 characterized by to use actuation information and program provided information when an input means acquires the actuation information which interrupts the output of the present program at least and directs the output of degree program, a storage means memorizes this actuation information, a data-processing means transmits the actuation information and the program provided information which memorized through means of communications and a user sets up program information.

[Claim 5] When an input means acquires the actuation information which controls the output sound volume of the present program at least and a user controls output sound volume, a storage means doubles and memorizes the present location obtained from output sound volume and a current District Public Prosecutor's Office appearance means. They are music and information offer equipment given in claims 1-4 characterized by a data-processing means sponsoring a program with the output sound volume memorized through the output-control means when a car approached the location memorized after that.

[Claim 6] An information offer station chooses and distributes music and information according to individual humanity news including the program information which the user set up. A current District Public Prosecutor's Office appearance means for music and information offer equipment to offer the music and information from broadcast and package media while providing a user with the music and information received by communication link in in the car, and to detect the present location of a

car, An input means to acquire the actuation which controls progress of a program, and the means of communications which communicates with an information offer station and receives program information, and music and information at least, A broadcast receiving means to output the received content of broadcast to a direct-output control means or a selection means, The selection means which tells the music and information which a user likes by collating the information showing the content of broadcast, and said individual humanity news to a storage means, An audio playback means to generate an audio signal from the audio equipment which reproduces package media, and the data memorized by the storage means, The music and information received by said means of communications while obtaining the present location detected with said current District Public Prosecutor's Office appearance means The direct or data-processing means which is processed and is told to an output-control means, A storage means to memorize said program information at least, and the program control means which constitutes the program for which a user asks according to the actuation information and said program information from said input means, Music and information offer equipment characterized by having an output-control means to control the output from said audio equipment, said audio playback means, and said broadcast receiving means by the directions from said program control means, and an output means to output music and information by control of said output-control means.

[Claim 7] They are the music and the information offer equipment according to claim 6 which was equipped with a speech synthesis means to generate the voice which read out the word or text memorized by the storage means, and was characterized by an output-control means controlling the output from audio equipment, a speech synthesis means, an audio playback means, and a broadcast receiving means by the directions from a program control means.

[Claim 8] An input means is the music and information offer equipment according to claim 6 or 7 characterized by acquiring the actuation information which recognizes a user's voice and controls progress of a program.

[Claim 9] A data-processing means is music and information offer equipment given in claims 6-8 characterized by enabling it to use device information when the device information which shows the configuration of music and information offer equipment with reference to a broadcast receiving means and audio equipment is created, device information is transmitted through means of communications and a user sets up program information.

[Claim 10] They are music and information offer equipment given in claims 6-9 characterized by to change the offer sequence of a program that an input means acquired the actuation information which interrupts the output of the present program at least and directs the output of degree program, a storage means memorized this actuation information, a data-processing means updated program information using the actuation information which memorized, and an output was interrupted.

[Claim 11] They are music and information offer equipment given in claims 6-10 characterized by to use actuation information and program provided information when an input means acquires the actuation information which interrupts the output of the present program at least and directs the output of degree program, a storage means memorizes this actuation information, a data-processing means transmits the actuation information and the program provided information which memorized through means of communications and a user sets up program information.

[Claim 12] When an input means acquires the actuation information which controls the output sound volume of the present program at least and a user controls output sound volume, a storage means doubles and memorizes the present location obtained from output sound volume and a current District Public Prosecutor's Office appearance means. A data-processing means is music and information offer equipment given in claims 6-11 characterized by sponsoring a program with the output sound volume memorized through [ when a car approaches the location memorized after that ] the output-control means.

[Claim 13] A storage means doubles current output sound-volume and output origin, and an input means memorizes, when the actuation information which controls the output sound volume of the present program at least is acquired and a user controls output sound volume at the time of program modification. They are music and information offer equipment given in claims 6-12 characterized by a data-processing means sponsoring a program with the output sound volume memorized through the output-control means when a program was sponsored from the same output origin after that.

[Claim 14] An information offer station is music and information offer equipment given in claims 1-13 characterized by electing the music and information which suits a user's taste based on individual humanity news including the program information which the user set up, adding to program information as recommendation and/, or an advertisement, and providing a user with an additional program.

[Claim 15] An information offer station chooses and distributes music and information according to individual humanity news including the program information which the user set up. The music and information, and broadcast which received music and information offer equipment by communication link in in the car, It is what offers a handsfree telephone function and a car navigation function while providing a user with the music and information from package media. A current District Public Prosecutor's Office appearance means by which said individual humanity news detects the present location of a car including the telephone number and point information, An input means to acquire the actuation which controls progress of a program, and the means of communications which carries out call origination to a predetermined number by the control from said input means, and said individual humanity news while communicating with an information offer station and receiving program information, and music and information at least, A broadcast receiving means to output the

received content of broadcast to a direct-output control means or a selection means, The selection means which tells the music and information which a user likes by collating the information showing the content of broadcast, and said individual humanity news to a storage means, The audio equipment which reproduces package media, and a speech synthesis means to generate the voice which read out the word or text memorized by the storage means, An audio playback means to generate an audio signal from the data memorized by the storage means, The music and information received by said means of communications while creating guidance information to predetermined timing based on the present location obtained from said current District Public Prosecutor's Office appearance means The direct or data-processing means which is processed and is told to an output-control means, A storage means to memorize said program information at least, and the program control means which constitutes the program for which a user asks according to the actuation information and said program information from said input means, An output-control means to control the output from said audio equipment and said speech synthesis means, said audio playback means, and said broadcast receiving means by the directions from said program control means, Music and information offer equipment characterized by having an output means to output music and information by control of said output-control means.

[Claim 16] An input means is the music and information offer equipment according to claim 15 characterized by acquiring the actuation information which recognizes a user's voice and controls progress of a program.

[Claim 17] A data-processing means is the music and information offer equipment according to claim 15 or 16 characterized by enabling it to use device information when the device information which shows the configuration of music and information offer equipment with reference to a broadcast receiving means and audio equipment is created, device information is transmitted through means of communications and a user sets up program information.

[Claim 18] They are music and information offer equipment given in claims 15-17 characterized by to change the offer sequence of a program that an input means acquired the actuation information which interrupts the output of the present program at least and directs the output of degree program, a storage means memorized this actuation information, a data-processing means updated program information using the actuation information which memorized, and an output was interrupted.

[Claim 19] They are music and information offer equipment given in claims 15-18 characterized by to use actuation information and program provided information when an input means acquires the actuation information which interrupts the output of the present program at least and directs the output of degree program, a storage means memorizes this actuation information, a data-processing means transmits the actuation information and the program provided information which memorized through means of communications and a user sets up program information.

[Claim 20] They are music and information offer equipment given in claims 15–18 characterized by using actuation information and program provided information when the actuation information acquired from the input means is memorized with a storage means, a data-processing means transmits the actuation information and program provided information which were memorized through means of communications and a user sets up program information.

[Claim 21] When an input means acquires the actuation information which controls the output sound volume of the present program at least and a user controls output sound volume, a storage means doubles and memorizes the present location obtained from output sound volume and a current District Public Prosecutor's Office appearance means. A data-processing means is music and information offer equipment given in claims 15–20 characterized by sponsoring a program with the output sound volume memorized through [ when a car approaches the location memorized after that ] the output-control means.

[Claim 22] A storage means doubles current output sound-volume and output origin, and an input means memorizes, when the actuation information which controls the output sound volume of the present program at least is acquired and a user controls output sound volume at the time of program modification. They are music and information offer equipment given in claims 15–21 characterized by a data-processing means sponsoring a program with the output sound volume memorized through the output-control means when a program was sponsored from the same output origin after that.

[Claim 23] An information offer station is music and information offer equipment given in claims 15–22 characterized by electing the music and information which suits a user's taste based on individual humanity news including the program information which the user set up, adding to program information as recommendation and/, or an advertisement, and providing a user with an additional program.

[Claim 24] A data-processing means is music and information offer equipment given in claims 15–23 characterized by creating guidance information to predetermined timing based on the present location obtained from the current District Public Prosecutor's Office appearance means, and adding to program information.

[Claim 25] A data-processing means is the music and information offer equipment according to claim 24 characterized by deleting the guidance information which created based on the present location obtained from the current District Public Prosecutor's Office appearance means, and was added to program information from program information to predetermined timing.

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] An information offer station communicates music and information selectively according to the information and the address which the operator set up, and this invention relates to the music and information offer equipment which receives and uses this in the car. Moreover, it is related with the music and information offer equipment having many functions, such as playback of a package audio, reception of a radio broadcasting, a handsfree telephone, and path advice.

[0002]

[Description of the Prior Art] As conventional information offer equipment, there is "Internet service provision equipment" shown, for example in JP,11-259497,A. A block diagram shows the configuration of the conventional technique to drawing 13.

[0003] In the conventional example 1, it has WWW browser 32 which outputs the reference acknowledgement section 31 which the client personal computer 3, a call, and this manage a user and a password, and recognizes information offer equipment, and information with a tag, and the tablet 33 for /setting out for a display.

[0004] In the side which offers information, the server change information section 14 for changing the provided information 11 which consists of the definition data 13 for continuing offering the WWW server 1 which offers information on the Internet, the server information classification data 12, and information, and this provided information 11 is formed.

[0005] A control device 2 is referring to the information and the individual user's A taste information 21 which were received from the WWW server 1, and transmits only the information according to liking of a user to the client personal computer 3.

[0006] The user enabled it to acquire the target information easily by removing the information which the information service user who uses the client personal computer 3 does not need by such configuration.

[0007]

[Problem(s) to be Solved by the Invention] With the information offer equipment (in the conventional example, it is called Internet service provision equipment) by such Prior art, although a user can acquire the target information efficiently by removing the information which an information service user does not need, considering utilization in the car, the following technical problems occur.

[0008] First, since the conventional example is aimed at the WWW browser used with the personal computer etc., a screen display of the information is carried out and a user acquires information visually. Therefore, it is difficult for the operator of a vehicle to acquire information. Although it is also possible to read out with voice the information displayed on the screen, the actuation which chooses information is difficult, and dangerous to the hindrance of operation under transit. [ become and ]



[0009] Although how to read out an actuation menu and to urge selection etc. can be considered when using a speech recognition technique in order [ to view ] to operate it rattlingly that there is nothing, the danger that there will be too many items which serve as an item to read out and alternative on the display/operating instructions designed on the assumption that it displayed, and actuation will have an adverse effect on operation actuation difficultly dramatically is.

[0010] Moreover, although information, such as news and shopping information, was offered with the information offer equipment of the conventional example, since there is no cooperation with the so-called car audio generally used in the vehicle, in order to acquire information and music, it needed to be used, having changed the client personal computer 3 and the car audio.

[0011]

[Means for Solving the Problem] In order to solve this technical problem, in the 1st invention, it is characterized by having the program control means which offers the music and information on desired from an information terminal in the car in the sequence for which a user asks during the means of communications which communicates the program configuration which the user customized beforehand by the communication link with an information offer station, and the content of information, and operation than to which greater importance is attached to safety.

[0012] Moreover, it is characterized by to have an audio playback means to generate an audio, and a data-processing means control these from the program control means which added audio equipment to the controlled system according to the 2nd invention, a storage means to memorize the information which obtained from the broadcast receiving means through the selection means, and the information acquired from means of communications, a speech synthesis means generate synthesized speech, and digital data.

[0013]

[Embodiment of the Invention] (Gestalt 1 of operation) It explains, referring to a drawing about the gestalt of operation of this invention below.

[0014] Drawing 1 is the block diagram showing the configuration of the music and information offer equipment applied to the gestalt 1 of operation of this invention. In drawing 1 , 101 is a its present location detection means, and detects the current position of a car. Dead REKONINGU (Dead Reckoning) using the map data which recorded the sensor which may use satellite positioning represented by GPS (Global Positioning System), and detects the travelling direction of a car and a travel, and the route configuration is sufficient as detection of the current position. Moreover, the approach which used both together may be used and the electric wave from the base station of radiocommunication and the current position detection approaches which combined satellite positioning with it, such as a cellular phone, are also available. 102 is means of communications, acquires music data and various kinds of information from an information offer station, and uses a cellular phone etc. 103 is an input means,

detects actuation of a user, and notifies it to the program control means 104. The program control means 104 controls progress of a program according to the profile which recorded the priority of information offer which the user (operator) by whom reading appearance is done set up etc. from the storage means 106.

[0015] A program control means constitutes the program according to liking of a user, and controls the output-control means 108 by control from the input means 103 and the data-processing means 105. With the signal from the program control means 104, an output-control means performs playback of the digital music decoded with the data-processing means 105, and sound-volume control, and outputs them to the output means 107. Although the information offered to a user is mainly voice and a sound, it may be displayed on a screen.

[0016] The means of communications 109 to which an information offer station communicates with the music and information offer equipment of a car side on the other hand, A storage means 112 to remember a user's profile of audio data many, such as various information and music, and a talk show, etc. to be the voice communication means 110 with a speech recognition function and a speech synthesis function, It consists of a selection means 113 to choose the information for which it asks according to each user's profile, and audio data, and a data-processing means 111 to perform management of a user and to control the above-mentioned means. Means of communications 109 can communicate not only with music and information offer equipment in the car but with a common personal computer and a Personal Digital Assistant. Moreover, it is possible through the voice communication means 110 informational acquisition and to set up with voice from the telephone and cellular phone of a fixed wire.

[0017] In the detailed setting-out information included in a user's profile, for a certain reason, setting up from music and information offer equipment in the car also enables setting out using a personal computer, a Personal Digital Assistant, a telephone, etc., also when difficult. In addition, the equipment installed in the vehicle is sufficient as music and information offer equipment in the car, and it may carry a Personal Digital Assistant and a personal computer into a vehicle, and may use them as music and information offer equipment. Of course, the equipment possessing communication facility, such as a cellular phone and a satellite telephone, is also available for these, and they should just have the element functionally shown in drawing 1 .

[0018] About the music and information offer equipment of the gestalt 1 of the operation constituted as mentioned above (it is hereafter called an information terminal), the actuation is explained below. Here, while the user of an information terminal drives an automobile, it aims at acquiring the music and information on desired safely.

[0019] First, the communication environment made into the premise of this example is explained. In this example, it considers as a premise that the information terminal of a mounted mold or a pocket mold can connect with an information offer service center

(it is only hereafter called a pin center,large) from the vehicle under migration, and it is needed. Drawing 2 is the explanatory view of the communication environment used as the background of this example. In this drawing, a right end information terminal is connected to an Internet Service Provider through a nearby access point. An Internet Service Provider offers the connection service to the Internet, publishes a subscriber's ID collectively and offers service of an electronic mail or a homepage. Although changing by a user's present location is common as for the access point, it may be single.

[0020] Or when using the data utility of radiocommunication carriers, such as a cellular phone, the base station which covers each communication link range called a cel may carry out the same work as the above-mentioned access point. A communications protocol and a data format are changed by the computer of this base station and carrier, and connection with the Internet is attained. In this case, a carrier will have the function of an Internet Service Provider.

[0021] Usually, an Internet Service Provider and an information terminal are connected by the cellular phone, or satellite communication / broadcast system, and PPP (Point-to-Point Protocol), WAP (Wireless Application Protocol), etc. are used as a communications protocol. In PPP, since the standard TCP/IP packet for the Internet can be exchanged, if URL (Uniform Resource Locator) of a pin center,large which wishes to connect at an information terminal is specified, it is connectable with a desired pin center,large via an Internet Service Provider. In this case, if the Internet Service Provider sees from the user of an information terminal in order that it may only relay the TCP/IP packet and may not perform special processing, it will be sensed to have connected with a direct pin center,large. Although the packet of an original specification is used in WAP or imode in order to gather the effectiveness of radiocommunication, the communicative approach is the same as that of TCP/IP of the Internet.

[0022] Therefore, the user of an information terminal can receive the information from two or more pin center,larges, such as pin center,larges A and B, only by changing URL of the pin center,large which is information offer origin. Although the information terminal may have memorized beforehand URL which is needed at this time and an Internet Service Provider may offer it, it is common to use the pin center,large called the search engine which shows a user URL by retrieval by keyword.

[0023] There are various classes, such as what offers what serves the information retrieval itself for a pin center,large in this way, news, and a weather report, what extracts to a specific field, collects and arranges detailed information and offers it and the thing which offers a talk and music like radio, and a thing which offers video. However, in the gestalt of this operation, the pin center,large used as the window which gives its service for [ in an automobile ] users shall be set to one, and an agreement user's individual humanity news and profile shall be managed in this pin center,large.

[0024] Drawing 3 is a flow chart which shows actuation of the information terminal in the gestalt 1 of operation, and explains actuation according to this.

[0025] At step 301, a user puts the engine of an automobile into operation. The information terminal may contain the cellular-phone function, and may connect and use a cellular phone. In using it, connecting a cellular phone, a cellular phone is turned on at step 301 and it connects with an information terminal.

[0026] At the following step 302, an information terminal accesses a pin center,large. At this time, the present location of a car is first transmitted to a pin center,large. At step 303, the existence of modification of a user profile is checked, when the profile is changed, it shifts to step 304, and the profile of the user concerned memorized in the pin center,large is downloaded. The default profile memorized to the terminal may be used in the state of initial shipment of an information terminal, and when a pin center,large is accessed for the first time, a default profile may be acquired from a pin center,large.

[0027] It explains referring to drawing 4 and drawing 5 about the content and the setting-out approach of a profile. A profile is prepared in order to choose the information which a user needs, and it consists of a user's routes, the favorite information, music, etc. which are used well.

[0028] Although setting out of a profile may use the information terminal carried in the vehicle, suppose that a user accesses a pin center,large via the Internet using a personal computer etc., and sets up a profile in this example. Moreover, when accessing the Internet, the web browser (HTML browser) currently generally used shall be used.

[0029] First, in order to elect the traffic information which a user needs, House A and Office B are set up on the map displayed on the web browser as shown in drawing 4 (a), and a commutation path is registered by arranging an arrow head on the route used as a commutation path. A user chooses the arrow head which turned to each direction with the mouse, dragging and dropping on a map, and specifies a route. The coordinate on the map which dropped the arrow head is transmitted to the Web server of a pin center,large by CGI (Common Gateway Interface) etc., in the pin center,large, specifies a route from this coordinate and a map display rectangle, and registers it into a database. Of course, House A and Office B are registered by the same structure. An outward trip and a return trip, or two or more commutation paths may be registered similarly. An identifier is given and registered into "the path to the office passing through a highway", "the going-home way of only a general path", etc. and a path in this case. Moreover, there is also a method of attaching and registering the mark of - etc. into the route which wants to know a traffic situation rather than registering as a path like drawing 4 (b).

[0030] Moreover, a user is able to set up the above-mentioned content with voice through a telephone using the voice communication means 110 of a pin center,large. In this case, both location is pinpointed and registered by reading out the address or

the telephone number of a house and office first. About the route which wants to know traffic information, a route name and a crossing name are inputted and registered with voice. Although it is a little complicated compared with the approach using a web browser, a commutation path, a path name, and the route that asks for traffic information offer can be registered by interactive processing generated by the voice recognition unit and voice synthesizer of a pin center, large.

[0031] Next, setting out of a program is explained based on drawing 5 (a). Drawing 5 (a) is a display image on a web browser when having set up informational offer sequence and the informational content of information. In this example, it provided in order of traffic information, E-mail, news, a weather report, stock quotations, and music, and the talk is set up so that it may not provide. Although the various setting-out approaches can be considered, the gestalt of this operation shows the example using the GUI (Graphical User Interface) components generally called a combo box etc. In these GUI components, a list indication of the alternative is given by clicking the carbon button to which the mark of \*\* is attached. As drawn on the 7th of the upper right of drawing 5 (a), and offer sequence, it is indicated by list, and alternative chooses a desired item with a mouse out of this alternative. In addition, it means that “-” does not set up. Moreover, it is shown that the carbon button of \*\* mark of the right sense has the item which is not displayed on right-hand side, an item is scrolled by clicking this carbon button, and a new item is displayed one by one.

[0032] Based on the passage direction of the route which set up traffic information by approach which was explained by drawing 4, or a route, only related traffic information is offered selectively. By the case where two or more paths are set as the outward trip or the return trip, when traffic congestion etc. is in one of the setting-out paths, a path without the occurrence of accident or traffic congestion may be recommended. For example, “Path A” and “Path B” are registered as a commutation path to a firm, accident occurs on “Path A”, and especially on “Path B”, when there is also no conspicuous delay, “Path B” is recommended. Or only when there are the accident and delay related to a path, the guidance function to office may be used. Moreover, a pin center, large is accessed with the time interval set up as a renewal interval of traffic information, and the newest traffic information is acquired. About this processing, it mentions later using the flow chart of drawing 3.

[0033] Although just the thing about a place-of-residence region is usually enough as a weather report, in asking for the weather report of the other area, it indicates in the column of the advice area of a weather report. For example, a zip code, area code, a cities, towns and villages name, etc. are indicated.

[0034] A combo box is used for a news genre like offer sequence setting out of a program, and it sets up a favorite news genre and its priority. Although only four items are displayed in this example, you may enable it to specify many items.

[0035] With the name of a sending agency etc., E-mail changes the communication approach of arrival of the mail, and realizes safe E-mail service in the car. For

example, the usual mail is carried out to about one advice for every activity of an automobile in 1 time or 30 minutes, and interruption to the user under operation is made into the minimum. This processing is easily realizable by controlling the check timing of e-mail arrival by the pin center,large. Moreover, since it is common to be read out by speech synthesis processing as for E-mail, it is [ in the car ] also effective [ the mail which does not turn to reading out, for example, the e-mail news of a long sentence or advertising mail, ] not to notify arrival of the mail. Since such mail is suitable for reading with the information terminal in office or a home, and a Personal Digital Assistant, the mail from the dispatch origin to which the server is set with un-notifying is not notified to the information terminal in an automobile, and is changed into the unread condition. Moreover, the manager of an information offer pin center,large registers common advertising mail issuance-origin into a server beforehand, and makes it un-notifying by the default. The location-dependent advertising mail towards a user in the car does not go into these criteria. Location-dependent advertising mail is the advertisement of the discount launch which the restaurant along the route which is running the car sends etc., and it points out the advertising mail currently designed as a message to an operator.

[0036] On the other hand, mail of high precedence registers the sending agency name to which I want you to notify arrival of the mail also in operation. For example, it is mail from a family etc. In this case, a pin center,large accesses the server (they are firms other than a pin center,large in many cases) which manages a user's E-mail for every minute, checks the e-mail arrival addressed to a user, and when having received a message in high precedence mail, it notifies e-mail arrival to an information terminal in the car promptly.

[0037] In addition, although the name of a sending agency is used for customize of E-mail in this example, it is usable at the same processing in various things, such as a keyword contained in a subject, dispatch time and dispatch origin, or a subject.

[0038] A stock name inputs the brand which is observing the motion of a stock price. A firm name is sufficient and the registration symbol of NYSE or Nasdaq may be used.

[0039] A music genre carries out priority attachment of the favorite genre, and registers it. A combo box is used also here.

[0040] If setting out explained above is completed, a user's profile will be updated by pushing an updating carbon button. And when an automobile is used for next time, the profile which modification of a profile has been recognized at step 303 and updated at step 304 downloads to an information terminal in the car. In addition, since setting out explained using drawing 5 (a) is a little fine and complicated, a pin center,large prepares some kinds of profiles supposing a typical user's pattern, and a user may be made to choose or it may determine the profile [ default ] based on the result which receives a user's age, sex place-of-residence region, etc. and easy question.

[0041] Moreover, a user is able to set up the above-mentioned content with voice through a telephone using the voice communication means 110 of a pin center,large

by the same approach as explanation by drawing 5 (a). In this case, although it is a little complicated compared with the approach using a web browser, the same content as the item selection which used the combo box by interactive processing is processed.

[0042] The profile which the user customized is memorized by the information terminal by processing to profile setting out by a web browser etc., and step 304. At the following step 305, an information terminal acquires the music and information which were distributed after being chosen by the pin center, large side according to this profile. Music data are data by which digital compression was generally carried out by technique, such as MP3 (MPEG 1 Layer3) and AAC (Advanced Audio Codec). Moreover, data, such as a loose talk show of the demand to tone quality, are compressed by the technique in which compressibility is more high. On the other hand, although information may be distributed with the compressed data of such voice, the approach of distributing by text data, in order to use the limited communication band effectively, and reading out by speech synthesis processing of an information terminal, and providing a user is common.

[0043] Acquisition of the above data ends a communication link at step 306. In the case of the communication mode which, of course, does not have a concept of communicative initiation/termination like packet communication, this step can be disregarded.

[0044] It is the part from which step 307 serves as the description of this invention, and the program with which a user is provided at this step is elected. The program to sponsor is acquired at the progress situation of a user's profile and a program, and step 308, and is determined from the result of a user's key stroke memorized. In the profile explained by drawing 5 (a), only the information on a route that he wants to check the route or traffic information which a user uses first is offered selectively. At this time, the sense of a commutation path is distinguished in the pin center, large because the present location of a car which transmitted to the pin center, large at step 302 judges the house neighborhood or the office neighborhood and judges attendance or going home in consideration of a day of the week and time of day. When a user's key stroke occurs, return and a program are re-elected as step 307 from step 309.

[0045] Actuation of the steering switch in configuration drawing of the information terminal shown in drawing 6, the sound-volume dial of a body, etc. is a key stroke. Progress of the program sponsored is controllable by operating the wheel switch of a steering switch. For example, if a wheel is rotated under 1 notch, the program under current offer will be skipped and it will shift to the following program. Moreover, if it is made to rotate on 1 notch, a current program will be repeated, and if it is made to rotate on 2 notches, it will shift to a front program. Another type switches, such as not a wheel switch but a push switch, may be used for such actuation, and you may operate it by the command with voice, such as "a skip", "a repeat", and the "back",

using speech recognition processing.

[0046] When there is such no key stroke, it shifts to step 310 and a program is sponsored. offer of a program is mainly based on the playback of an audio by which digital compression was carried out, and speech synthesis processing of a text -- reading out -- do -- those processings are controlled by step 310. In order to only control audio playback etc., the flow chart of drawing 3 does not wait for termination of a program, but shifts to step 311 immediately. Here, termination decision of a program is made, and when the program under offer is completed, it moves to step 307 at offer of return and the following program. In the case of program progress, it is also effective to carry out by putting in the speech of a connector supposing an imagination D.J. with the voice compounded from digital sound recording or a text as [ make / a user / notice the check of actuation and the time amount which a program change takes ].

[0047] When the program under offer is continuing, it shifts to step 312 and a progress judgment of the predetermined time for updating the information from a pin center,large is made. For example, in the example of drawing 5 (a), since the traffic information renewal interval was set up with 30 minutes, it judges whether 30 minutes have passed since the event of accessing a pin center,large at step 302. When having passed, a pin center,large is again accessed at step 313, the newest traffic information etc. is acquired, and the processing so far is repeated. When predetermined time has not passed yet, return program offer is continued to step 308. What is necessary is just to set up predetermined time more greatly than the usual commuting time, in accessing to a pin center,large only once, whenever it uses an automobile. Since the delay by the accident which the traffic information actually offered surely had delay, and was close and occurred is not avoided in many cases, if commuting time is about 30 minutes from 15 minutes, it will be thought that the need of updating traffic information repeatedly is thin.

[0048] In addition, in distributing update information to an information terminal from a pin center,large with a predetermined renewal interval, step 312 and step 313 become unnecessary, and the same effectiveness is acquired by the information on the content of a program chosen at step 307 being updated with a predetermined time interval.

[0049] During operation than to which greater importance is attached to safety when a user customizes a desired program configuration and the desired content of information beforehand using a personal computer etc., the above processing enables it to reduce the count of actuation of a device, in order that an information terminal in the car may provide in order of a request of the music and information on desired. Moreover, since progress of a program is controllable by easy actuation, also when skipping the thin news of interest or repeating the information which it failed to hear, effect to operation actuation can be made into the minimum.

[0050] Furthermore, in order to reduce excessive actuation, sound-volume control



can also be carried out by steps 308 and 310. A present location when a user does volume actuation, the vehicle speed, and sound volume are memorized at step 308. Sound volume is changed to transit of a general path and a highway in many cases, and it is in the inclination proportional to the load noise which becomes large as the vehicle speed goes up. Then, it becomes possible to reduce the count of volume actuation in the same commutation path with setting up sound volume automatically from a its present location and the vehicle speed, and outputting a program at step 310, based on the result of having memorized and learned volume actuation of a user. [0051] Moreover, the offer sequence and priority of a program with many counts of a skip can also be changed by memorizing a key stroke at step 308. For example, when the news of international:EU are offered in the news genre of drawing 5 (a), and skipped by 50% or more of probability, priority can be realized by lowering one etc. In this example, when it is skipped 5 times or more while the news about EU were offered 10 times, priority will be derated to 3 from 2.

[0052] Thus, if the usefulness of the record of the key stroke memorized at step 308 is high and a record is transmitted to a pin center,large at step 302, it can be used effective also in the next renewal of a profile. Drawing 5 (b) is step 302, and when a key stroke record is transmitted to a pin center,large, it is a screen image when a user using a web browser and updating a profile. The difference from drawing 5 (a) is only the point that the rate of a skip is displayed on the screen on a web browser. The rate of a skip divides the count to which skip actuation was performed by the count of offer of the information concerned. In this example, about offer sequence, the rate of a skip is displayed altogether, and the rate of a skip exceeding 30% is displayed about the customize item. Since it will be easy to decipher an item with the high rate of a skip if such a display is performed, customize becomes easy, and music is performed and it can perform more efficient information offer in the car. Therefore, a user can be provided with music and information, without spoiling the insurance under operation.

[0053] In addition, although information effective in customize was explained as a rate of a skip here, this should just understand the degree of utilization of each program by the \*\*\*\*\* actuation result.

[0054] As explained above, since the music and information on desired are offered in order of a request from an information terminal in the car, according to the gestalt 1 of operation, during operation than to which greater importance is attached to safety when a user customizes a desired program configuration and the desired content of information beforehand, it becomes possible to reduce the count of actuation of a device. Moreover, since control of a skip of a program, a repeat, etc. can be performed in easy actuation, effect to operation actuation can be made into the minimum. Furthermore, futility can be further excluded for actuation by making an actuation record in the car reflect in volume control or a program configuration.

[0055] As a result, it becomes possible to provide the user under operation with

music and information at insurance.

(Gestalt 2 of operation) The gestalt 1 of operation of this invention and the gestalt 2 of the operation constituted similarly are explained below. Although the basic part of the information terminal in the gestalt 2 of operation is the same as the gestalt 1 of operation, it differs in that it cooperates with the audio regenerative function of a package and broadcast. Moreover, it also has a handsfree telephone and the function of car navigation. With the gestalt 2 of operation, not only offer of the music and information by communication facility but music and information offer by package / broadcast media are unified, and the actuation at the time of using a handsfree telephone and a car navigation function further is also unified.

[0056] Drawing 7 is the block diagram showing the configuration of the information terminal applied to the gestalt 2 of operation of this invention. Since the same number is given about the same means as drawing 1 in drawing 7, the block newly added by drawing 7 is explained. 114 is audio equipment and music (sound recording) regenerative apparatus, cassette tape players, etc. of an optical disk, such as CD (Compact Disk), MD (Mini Disk), a DVD (Digital Video Disk) player, and CD changer, are common car audio devices etc. Moreover, there is also a regenerative apparatus of the audio which carried out digital compression using codecs, such as MP3 and AAC. Such audio equipment 114 shall have seeking of a music unit, playback, etc. controlled from the program control means 104, or shall have the communication facility for transmitting the information of a music name, an artist, etc. Moreover, the regenerative function of a digital audio is realizable with the audio playback means 116 within an information terminal. The speech synthesis means 115 compounds the voice which read out the text memorized by the storage means 106, and is effective in reducing substantially the communication link cost of information communication links, such as news, and a rate.

[0057] With the gestalt 2 of operation, there is also a block of music and an information broadcasting station, and the data-processing means 120 is broadcasting various kinds of music and information contents memorized for the storage means 121 through the broadcast means 119 here. At an information terminal in the car, the broadcast receiving means 118 receives broadcast. In general AM/FM broadcasting which is analog broadcasting, since there is no information for judging the content of broadcast, a receiving result is sent to the output-control means 108. When specified as a program which should be sponsored according to a user's profile, a user is provided with the content of analog broadcasting of this AM/FM through the output means 107. On the other hand, in an FM multiplex broadcast, and digital terrestrial broadcasting (radio, television) and digital satellite broadcasting service (radio, television), the audio data by which digital compression was carried out are broadcast. In these broadcasts, since the information which generally shows the content of broadcast is attached, in the selection means 117, only the data of a request of a user are chosen based on a user's profile, and the data received with the broadcast

receiving means 118 are memorized with the storage means 106.

[0058] About the information terminal of the gestalt 2 of the operation constituted as mentioned above, the actuation is explained below. Here, while the user of an information terminal drives an automobile, it aims at acquiring the music and information on desired safely.

[0059] Since the flow of processing is the same as that of drawing 3 , only the part from which processing differs is explained. Drawing 8 is a flow chart which shows actuation of the processing to the program of the information terminal in the gestalt 2 of operation, and explains actuation according to this. Processing explained here is performed by standing in a row with the processing after step 304 in drawing 3 .

[0060] At step 801, a user's profile is acquired and the information about a desired program is acquired. The profile extended with the gestalt 2 of operation is explained later. At the following step 802, the broadcast specified based on the profile is received and it shifts to step 803. Here, it judges whether the received broadcast has the information which shows the content of broadcast. As for the information which shows the content of broadcast, it is common to be given as a tag of XML (eXtensible Markup Language). If it is the tagged broadcast, only the broadcast data of a request of a user will be chosen and memorized by shifting to step 804 and collating a profile and a tag, and it will shift to step 805. In not being broadcast with a tag, it shifts to step 805 from step 803.

[0061] At step 805, the need of providing a current user with a program is judged. The program with which a user is provided has the package music using music and information, a CD player, etc. which were obtained by the communication link explained with the gestalt 1 of operation other than broadcast etc., and the program to sponsor is determined by profile and channel configuration of the user who mentions later. When the program with which a user is provided is not broadcast, it shifts to step 802 and above-mentioned processing is repeated.

[0062] In providing a user with a program, it shifts to step 806 and performs an audio output. In analog broadcasting without tag information, an audio output outputs the audio which received directly, and when tag information is attached, audio playback is carried out and it outputs the data stored at step 804.

[0063] The above processing shows processing of the program output in step 310, when the program sponsored by broadcast at step 307 in drawing 3 is chosen. What is necessary is just to reproduce the music by which program assignment was carried out simply about the package audio memorized by optical disks, such as CD/CD-R (CompactDisk Recordable), DVD/DVD-R, and MD, and semiconductor memory, HDD (Hard Disk Drive) and a cassette tape.

[0064] The above is the offer approach of the program which uses broadcast and package media as the source.

[0065] Since the flow of overall processing is the same as that of the gestalt 1 of operation, the processing which serves as the description of the gestalt 2 of

operation with reference to drawing 3 is explained.

[0066] When accessing to a pin center, large at step 302, the information on the device carried in the automobile is transmitted to a pin center, large. When AM / FM radio, digital terrestrial radio, and a digital satellite radio set are carried in the car, such loading information is transmitted to a pin center, large. Since it is receivable if there are communication devices, such as a cellular phone on condition of having a radio broadcasting on the Internet at the information terminal of the gestalt of this operation, a special receiver is not needed. In the pin center, large, the list of broadcasting stations which are carrying out broadcast service by each media first is acquired. The list of this broadcasting station is acquirable from on the Internet etc. including the music and the information genre which each broadcasting station offers. Next, based on the music genre which the user in a profile likes, ranking of the broadcasting station currently broadcast by each media is carried out. When carrying out ranking of the broadcasting station of the same genre, the popular ranking of the broadcasting station currently exhibited may be used and a number of ranking registered into the profile of other users who have managed in a pin center, large may be used. Thus, the list of broadcasting stations by which priority attachment was carried out according to liking of a user for every media is displayed like drawing 9 (b) on a web browser at the time of setting out of a profile.

[0067] Moreover, about package audio equipment, such as a CD player, the information which shows the content of audio data, such as a music name currently recorded on the media in each device with the device information carried in the automobile, is transmitted. Even if it is the media which a music name does not understand, it is possible to acquire a music name with the database by the side of a pin center, large by transmitting Disk ID etc., if it is the package marketed. By transmitting collectively the ranking of the count elected and reproduced at step 307 to a pin center, large, the number ranking of playbacks can be displayed on the music name list for every device as (10) (a round head 10 is shown.) etc. from \*\* like drawing 9 (c), and information effective in customize can be offered. \*\*\*\*\* in drawing 9 (b) is also the same semantics.

[0068] The part from a traffic information renewal interval to a music genre of customize setting out of drawing 9 (a) is the same as that of drawing 5. The offer sequence in drawing 5 is collected by the channel and program setting out of drawing 10. Moreover, three items of the telephone number in customize setting out, a storage point, and the destination are used for a handsfree telephone function and a car navigation function, and are explained later.

[0069] A channel and program setting out as shown in drawing 10 are set up using customize setting out of drawing 9 (a), the broadcasting station list of drawing 9 (b), and the music name list of drawing 9 (c) which were constituted as mentioned above. What added the information about a commutation path to the content shown in drawing 9 and drawing 10 serves as a user's profile. Moreover, a part of drawing 9 and

the content of drawing 10 download from a pin center, large to an information terminal at step 304. The example of a format at this time is later explained based on drawing 12.

[0070] The channel and program menu of drawing 10 define the program sequence of information, E-mail, music, radio, a telephone, and a point offered for every channel.

About a telephone and a point, it mentions later.

[0071] For example, about an information channel, it is the same as that of the gestalt 1 of operation almost, and order, such as traffic information and a weather report, is provided with information. Although the points which are the channels which E-mail became independent of differ in the gestalt 1 of operation, according to the significance of E-mail, you may make it an independent channel or may also include in an information channel. In order to only put in order the mail which should notify arrival of the mail, it is not necessary to set up especially in setting out on Web but, and as long as E-mail has the need, it may set up the maximum number of cases of e-mail.

[0072] By providing the low order of the priority of an information channel with the recommendation and the advertisement from a pin center, large, expanding the width of face of program selection of a user and reduction of the charge of utilization by advertising expenses are enabled. For example, a popular news program is sponsored as recommendation information in the news genre which the user has not set up. Since the recommendation information which should just skip if not pleased, and was not skipped at the time of setting out on next Web when pleased is displayed like drawing 11, the news genre of drawing 9 (a) etc. can be updated based on this. In the example of drawing 11, the recommendation program every three programs each is displayed in three channels, news, music, and radio. It enables it to copy a recommendation program to drawing 9 (a) etc. by clicking "adoption" carbon button here. With the gestalt 1 of operation, although the count of a skip of a program was used for narrowing down of a profile, this recommendation information has the effectiveness which expands the width of face of a program.

[0073] Similarly, since becoming useful information for a user can also reduce a utilization tariff a certain top, the advertisement is effective.

[0074] A music channel puts package music in order for every music, and is the same as that of the program function of a CD player. The point which is intermingled in the music currently recorded on various kinds of package media, and can program performance sequence differs from the existing program function. For example, in the example of drawing 10, from memory card, the 1st music is set [ hard disk ] up so that the 2nd music may reproduce the 10th music from CD. This setting out chooses music to listen to to the music name list of drawing 9 (c), and should just specify the sequence of the request in the music channel of drawing 10. Consequently, the program of a music channel is memorized by the information terminal, for example in the following forms. The example of a format is shown in the music record of drawing

12 (c). It consists of specific information of a media code, and a music name and an artist name and music, and specific information changes with media and a tune number, a disk number + code, a file name, etc. are recorded.

1.0 (memory card) : -- a song and Takao Kimura [ of summer ]: -- NatuUta2.4(hard disk):Miracle-P.Jackson:miracle3.1 (CD) : Koichi a river and Yoshimura : 2 -- it is the information for pinpointing the head of each music data storage area, and based on this, these are the program outputs of step 310, they control each package audio playback unit, and output a program. A musical favorite user is increasing channels, such as "music 2" and "music 3", and may program many music. Moreover, it is also effective to add the recommendation music from a pin center,large and the music used for an advertisement by the music channel as well as an information channel.

[0075] A radio channel chooses a favorite radio station out of the radio station list of drawing 9 (b), and sets up priority. A setting-out result is memorized by the information terminal, for example in the following forms. The example of a format is shown in the radio record of drawing 12 (c). TD means a terrestrial digital radio broadcasting and SD means the satellite digital radio broadcasting here.

1.1 (FM) : 870 (MHz) 2.0 (AM) : 1320 3.3(kHz) (digital satellite):45 (channel) These are URL on the media and the offer frequency which are the information for pinpointing each broadcasting station, a channel number, and the Internet radio. The method of pinpointing a broadcasting station is determined by media. Moreover, it is effective to add the recommendation broadcasting station from a pin center,large by the radio channel as well as an information channel as a means which expands the width of face of selection of a user.

[0076] In addition, the sequence of the channel itself can also be changed. For example, it is also possible to constitute a channel in order, such as a music channel, an information channel, and a radio channel.

[0077] The channel and program information on drawing 10 constituted as mentioned above are downloaded at step 304 as a part of a user's profile, and is memorized by the information terminal. Drawing 12 is the example of a format of a profile. Drawing 12 (a) is set up in order to choose required traffic information, and it consists of a house and an office location, commutation path information, a traffic information acquisition location, and a traffic information renewal interval. A path is memorized as a set of the link pinpointed by Link ID, and also makes the traffic information acquisition location the same. A traffic information acquisition location may be memorized by lat/long in the same format as a house location. Although a traffic information renewal interval is memorized per part, when update information is sent at this spacing from a pin center,large, it is not necessary to memorize this data to an information terminal.

[0078] Drawing 12 (b) is the example of a format of a channel, and the number of programs for every number of channels and channel is also adjustable. For example, if an information record to a point record assigns the numbers from 1 to 6 as ID in

order, a format of a record can be specified from each channel ID. Drawing 12 (c) is a format of each record, and explains except the music explained previously and a radio record. An information record assigns the code of 0 to 6 which shows an information class, and records it on the order which asks for offer. the example of drawing 10 -- 0, 2, and 1 -- it becomes ... The E-mail record is recording the upper limit of the only notified number of E-mails. A telephone record memorizes to a pair by carrying out a phase hand's name and the telephone number to telephone. A point record memorizes by carrying out a point name and its lat/long coordinate to a pair.

[0079] In program election of step 307, it is provided in order of the information channel of drawing 10 , an E-mail channel, a music channel, and a radio channel. Moreover, in each channel, a program is sponsored according to priority. A user's key stroke acquired at step 308 has main actuation of the steering switch of drawing 6 , and actuation of the wheel switch which controls progress of a program, and the channel selecting switch which chooses a channel is acquired.

[0080] The program selection by the wheel switch is the same as that of the gestalt 1 of operation, and can control a skip of a program, a repeat, and the back by the revolution of a wheel. The channel selecting switch added with the gestalt 2 of operation chooses the channel set up like drawing 10 , and a channel is changed in patrol by carrying out a depression once like information ->E-mail-> music -> radio -> telephone -> point -> information. According to such a key stroke, based on the channel and race card of drawing 10 , make traffic information, news, etc. read out through speech synthesis processing at step 310, or control mounted audio equipment, and a song is selected in the radio station for which a user asks, or package music is played.

[0081] In addition, such actuation may be operated not through a switch but through speech recognition processing by the command with voice, such as "a skip", "a repeat", the "back", "degree channel", and a "before channel."

[0082] Moreover, it is also important to reduce a user's count of volume actuation by controlling sound volume by steps 308 and 310 like the gestalt 1 of operation. With the gestalt 2 of operation, two or more media and audio equipment are changed, and a program is sponsored. First, sound volume when a user adjusts sound volume at the time of each media playback is memorized. From next time, when outputting a program at step 310, the sound volume of a device is controlled according to the sound volume for every memorized media, and a program is outputted. Since it can control automatically to the sound volume which the user set up before even when the audio equipment controlled by this processing with the change of a program is changed, it becomes possible to reduce the count of volume actuation of a user.

[0083] During operation than to which greater importance is attached to safety when a user sets up a desired program configuration beforehand using a personal computer etc., the above processing enables it to reduce the count of actuation of a device, in order that an information terminal in the car may provide in order of a request of the

music and information on desired. Moreover, since a program is only controlled by easy actuation and the change of utilization media or audio equipment is controlled automatically, a user can reduce the count of actuation of a device greatly compared with the former in the scene which controls two or more devices.

[0084] In addition, about the music and information accumulated by broadcast with a tag explained by drawing 8 , information can be treated like the information acquired by communication link, and music can be treated like package music by memorizing to a memory card or a hard disk drive.

[0085] Next, actuation integration of a handsfree telephone is explained. The information terminal explained with the gestalt of this operation as shown in configuration drawing of the information terminal shown in drawing 6 is used for a telephone, connecting. Of course, although a telephone module may be incorporated in an information terminal, the function of the handsfree telephone which talks over the telephone, without having a telephone anyway is called for.

[0086] First, numbers to send to the column of the telephone number of drawing 9 (a) are enumerated. From this inside, what has high dispatch frequency is elected, and priority is attached and set as the term of the phone channel of drawing 10 . After choosing a phone channel with the channel selection carbon button of drawing 6 to send a telephone in the car by carrying out such setting out beforehand, a dispatch place is chosen with a wheel switch. A user is notified of the name of the dispatch place chosen at this time by speech synthesis processing, and if it is a desired dispatch place, it will be automatically dialed by waiting about 2 seconds. While wedging a ringer tone into a program and outputting it at the time of arrival of the mail, it changes into the condition which can be talked over the telephone by operating one of steering switches. Such processing is attained by controlling a telephone according to the connection protocol between an information terminal and a telephone.

[0087] Except the actuation shown here is sufficient, for example, it does not matter even if it will use it as a decision carbon button as it works as a push button if a decision carbon button is prepared separately or the depression of the wheel switch is carried out. Moreover, a voice command may be substituted for actuation of a steering switch as explained above.

[0088] As shown above, the device which can also operate actuation of a handsfree telephone safely by unifying with music and information acquisition actuation is realizable.

[0089] Next, actuation integration of a car navigation function is explained. It shows a car navigation function to the path from a its present location to the destination, or it points out the function to search the destination. The car navigation currently assumed with the gestalt of this operation shall share a function between a pin center, large and an information terminal as follows.

Path advice of a short distance ... Destination setting out of an information terminal storage point ... Path advice of an information terminal long distance ... Retrieval of



the pin center,large destination ... Pin center,large \*\*\*\*, and the storage point and destination of drawing 9 (a) are set up. the user could input positional information (lat/long) and a point name on the web browser, and the storage point visited them at the information terminal before -- it is -- it is -- the registered point is memorized and you may transmit to a pin center,large at step 302. Priority is given out of the storage point of this drawing 9 (a), and what is considered to be needed in the car is registered into the point channel of drawing 10 .

[0090] In the car, the channel selecting switch of drawing 6 is pushed, a point channel is called, then a wheel switch is operated, and a desired point is chosen. The variety of the same operating instructions as the phone channel previously explained about this selection approach is also considered. inside an information terminal, the selected storage point is set up as a destination, calculates the route from a its present location automatically, and is a driver -- it shows around by carrying out a user pair.

[0091] Guidance detects that the branch point of a route drew near based on the calculated route with the current District Public Prosecutor's Office appearance means 101, and tells a user with voice the route and direction at which it should turn. The voice of advice is as follows, for example.

[0092] "it is the right as" the cherry tree of about 300m beyond -- although it consists of voice to which digital sound recording was usually carried out [ voice / this / advice ], and voice compounded from the text, it is recorded in the form where it interrupts in a program. When checking advice voice again by recording, advice voice can be again reproduced by actuation of the same wheel switch as the time of returning the usual program, and the actuation about path advice of car navigation can also be unified. Moreover, since advice voice becomes unnecessary when the time when it has passed through the branch point correctly, and the following advice voice are outputted, when such, it may usually be eliminated from the inside of a program.

[0093] On the other hand, destination retrieval in the large range is not performed with an information terminal simple substance, but it sets up by the pin center,large side. First, in case a travel is planned, a series of processings which investigate and reserve the empty situation of a hotel etc. use the service on the Internet. At this time, the location of a hotel and the location of a tourist resort are notified to a pin center,large. It does not matter even if this advice can also send E-mail to a pin center,large and it sets up because positional information cuts & pastes on a web browser. Thus, the positional information of the set-up destination is registered into the column of the destination of drawing 9 (a).

[0094] Destination information is downloaded from a pin center,large, when the mounted information terminal accesses a pin center,large at step 302, and it is automatically set as the day which moves as a destination of an information terminal. After visiting a Rigge golf course first, when moving to an ooo hotel like this example, the location of a golf course is first set as the destination, and when it arrives at a

golf course, a hotel is set up as a destination. Moreover, in a long-distance drive, a route may be comparatively calculated in the pin center, large, and a route may be downloaded to the destination and coincidence at step 302.

[0095] When setting up the destination by the pin center, large side, it is in others. For example, it is destination setting out by retrieval of an address, a zip code, the telephone number, a yellow page, etc. Minding the speech recognition/high-class synthesizer unit, and the high-class operator by the side of a pin center, large leads to improvement in convenience rather than only an information terminal in the car performs such complicated destination setting out. For example, only with the yellow page carried in the vehicle, to look for a less than 10km Italian restaurant from a its present location, since today's reservation status is not known, it is necessary to check by telephone etc. If such retrieval is performed in the pin center, large, since the reservation status acquired on-line can also be incorporated on retrieval conditions, only the Italian restaurant which can reserve today can be extracted. The extracted destination is acquirable to an information terminal through the term of the destination of drawing 9 (a) by requesting such retrieval from an operator or requesting the voice communication computer of a pin center, large with voice with a voice dialogue technique.

[0096] Since the guidance after the destination was set up is as having explained previously, it is omitted.

[0097] As shown above, the device which can also operate actuation of a car navigation function safely by unifying with actuation of music and information acquisition, and a handsfree telephone is realizable.

[0098] Although an advertising point is in the point channel of drawing 10, this has application in case the restaurant which is ahead along the route which a user is running advertises a launch. Moreover, it also becomes possible to fluctuate the price of a launch menu according to the vacancy situation of a restaurant, and to raise the turnover of a seat. For example, a visitor can be promptly called in by offering a launch menu at a lower tariff a little, when there are many vacancies. Conversely, if a vacancy decreases, a visitor will be guided to other restaurants which become cheap relatively because the tariff of a launch menu goes up. A restaurant has the merit to which a user side can also find a vacancy easily, when the turnover of a seat can be gathered. An advertising point is what recorded points, such as this restaurant, and guidance to a restaurant is offered by choosing this.

[0099] The example of an activity based on the concrete scenario of the information terminal finally explained until now is given. here -- "" -- inside is utterance of an information terminal and the user who is a driver is operating it using a steering switch. □ Inside shows actuation of a user, it is shown that \*\* (\*\*) rotated one notch of wheel switches upwards (below), and it is shown that C pushed the channel selection carbon button.

[0100] [cellular phone -- an information terminal -- connecting -- engine start] of an

automobile -- "good morning. There was accident by the attendance on the street using --(after 3 seconds) -- high speed which investigates the traffic situation about the attendance root. The path to office is calculated. "

[Automobile start] "please move on the Yamada passage as it is. They are headline news this morning. First, .."

[News are heard for a while "next, they are the news of food poisoning."]

[\*\*] "it skips. Since it was the last news, next, it is weather intelligence. "

[weather intelligence is heard] -- " -- although it is among weather intelligence (in another voice) -- the cherry tree passage of 500m beyond -- the right .. "

[\*\*] "please move on rightward as the cherry tree of 500m beyond (in another voice). The rest is the same path as usual. "

"It returns to weather intelligence. Since there was interruption, it repeats from the beginning. "

[\*\*] "immediately after it skips and there is interruption, I tell weather intelligence from from."

[Weather intelligence is heard.] "probably, there are no worries about rain. Now, since E-mail has not arrived this morning, it moves to stock quotations. It is OX Steele ..."

[Stock quotations are heard "if E-mail of the stock price memorandum is carried out to office, something should push a carbon button."]

[C] "the stock price memorandum was sent. Then, please enjoy favorite music. "

[-- music is listened to, sometimes skipping by \*\* or changing a channel with the C carbon button.

[0101] ] to which CD, HDD, digital radio, etc. are changed automatically "next, it is music recommended [ a pin center,large to ]."

[The digital music by which digital broadcast are recording was carried out is listened to to the last "since a note will be made if it gets close on a its mind, please push a carbon button."]

[C] "it understood. Please also look at a recommended corner by next customize. " Please give [office as work \*\*\*\*\* arrival] "today also."

[-- stop -- engine shutdown] -- it be only the easy actuation which control a program during operation than to which greater importance be attach to safety when a user set liking etc. as a profile beforehand according to [ as having explained above ] the gestalt 2 of operation and an information terminal constitute and sponsor the program for which a user ask, and since the music and the information from media, such as a communication link, broadcast, and a package, and guidance information be acquirable, the count of a device of actuation can reduce greatly. Furthermore, actuation of a handsfree telephone or a car navigation function can also be unified. Therefore, offer of the safe music and information which made effect to operation the minimum etc. is attained.

[0102]

[Effect of the Invention] During operation than to which greater importance is

attached to safety when a user customizes a desired program configuration and the desired content of information beforehand according to the gestalt of the above operation according to the 1st invention so that clearly, since the music and information on desired are offered in order of a request from an information terminal in the car, it becomes possible to reduce the count of actuation of a device. Moreover, since control of a skip of a program, a repeat, etc. can be performed in easy actuation, effect to operation actuation can be made into the minimum. Furthermore, the futility of actuation can be further excluded by making an actuation record in the car reflect in volume control or a program configuration.

[0103] As a result, it becomes possible to provide the user under operation with music and information at insurance.

[0104] Moreover, it is only the easy actuation which controls a program during operation than to which greater importance is attached to safety when a user sets liking etc. as a profile beforehand according to the 2nd invention and an information terminal constitutes and sponsors the program for which a user asks, and since the music and the information from media, such as a communication link, broadcast, and a package, and guidance information are acquirable, the count of actuation of a device can be reduced greatly. Furthermore, actuation of a handsfree telephone or a car navigation function can also be unified. Therefore, offer of the safe music and information which made effect to operation the minimum etc. is attained.

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] The block block diagram of the information terminal applied to the gestalt 1 of operation of this invention

[Drawing 2] The explanatory view of the information service system applied to the gestalten 1 and 2 of operation of this invention

[Drawing 3] The flow chart explaining actuation of the gestalten 1 and 2 of operation of this invention

[Drawing 4] The example of a display of the setting-out screen for the traffic information selection applied to the gestalten 1 and 2 of operation of this invention

[Drawing 5] The example of a display of the profile setting-out screen applied to the gestalt 1 of operation of this invention

[Drawing 6] Image drawing showing the configuration of the information terminal in the gestalten 1 and 2 of operation of this invention

[Drawing 7] The block block diagram of the information terminal applied to the gestalt 2 of operation of this invention

[Drawing 8] The flow chart explaining the processing about the broadcast reception applied to the gestalt 2 of operation of this invention

[Drawing 9] The example of a display of the profile setting-out screen applied to the gestalt 2 of operation of this invention

[Drawing 10] The program and the example of channel setting out applied to the gestalt 2 of operation of this invention

[Drawing 11] The example of a recommendation information screen applied to the gestalt 2 of operation of this invention

[Drawing 12] The example of a format of the profile applied to the gestalt 2 of operation of this invention

[Drawing 13] The block diagram of conventional Internet service provision equipment

[Description of Notations]

101 Current District Public Prosecutor's Office Appearance Means

102 Means of Communications

103 Input Means

104 Program Control Means

105 Data-Processing Means

106 Storage Means

107 Output Means

108 Output-Control Means

109 Means of Communications

110 Voice Communication Means

111 Data-Processing Means

112 Storage Means

113 Selection Means

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